Technical Limitations

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1. Strategic vs. Tactical Usage

FIS-B information is to be used as a strategic planning tool for pilot decisions on avoiding inclement weather areas that are beyond visual range or where poor visibility precludes visual acquisition of inclement weather. FIS-B information may be used as follows:

- To aid the pilot in situational awareness of hazardous meteorological conditions.
- As a cue to the pilot to communicate with the ATC controller, AFSS specialist, Operator Dispatch, or Airline Operations Control Center (AOCC) to get further information about the current meteorological conditions.

In no case should the pilot take any evasive action based solely upon the FIS-B display. The FIS-B information is intended for assistance in strategic flight planning purposes only and lacks sufficient resolution and updating necessary for tactical maneuvering. The FAA has approved the FIS-B system and applications to the criteria contained in AC 20-140, dated August 16, 1999. This approval was based on the safety and interoperability requirements contained in AC 20-FIS. This design approval does not constitute operational authorization.

FIS-B is not intended to replace voice radio services. Pre-flight and in-flight voice communication of weather and meteorological information, in accordance with FAA operating rules, is still required.

2. Coverage

The system coverage map indicates where FIS ground stations are currently located. Altitude coverage is highly dependent on terrain, obstructions, and the airborne installation. While it may be possible to receive FIS products on the ground if there is a direct line-of-site to the ground station antenna, generally reception will occur from 5000 ft. AGL to FL 450 when within a 70 nm radius of the ground station.

3. Weather Products

Textual weather reports will not be displayed for the following conditions:

- Exceedance of report valid time
- Incorrect report type
- Missing report location
- Missing report issuance date / time
- Corrupted report
- Flight plan and StormScope overlays are inactive when textual weather reports are being displayed.

Graphical METARs

- Lack of reported ceiling and/or visibility in a valid textual METAR report will be displayed via a cross hatched white pattern.
- If a textual METAR report exceeds 120 minutes, the graphical icon for that reporting site will not be displayed. If the report exceeds 75 minutes but less than 120 minutes, the icon will be set to the aged state, still permitting access of more information associated with that site.

NEXRAD

- Displayed echo (precipitation) intensity colors are consistent with RTCA DO-267, NEXRAD type 2 except for a lower minimum threshold (15dBz). Depicted precipitation levels have been carefully coordinated with on-board radar, but they will not always agree. Radars typically provide rainfall intensity, not turbulence.
- Severe rainfall areas may or may not correspond to turbulent air or other areas of severe atmospheric phenomena such as hail. Severe convective activity should always be given wide berth- consult the AIM.
- NEXRAD minimum graphical resolution is 4 km x 4 km.
- When the NEXRAD mosaic exceeds the expiration time (75 minutes) it is no longer displayed.
- Data from individual NEXRAD sites is issued every 4 – 6 minutes. Individual site data is then combined to form a national mosaic. Due to processing delays, this information should not be used for tactical purposes.
- NEXRAD Base Reflectivity has limited upward viewing capability resulting in gaps near the ground based radar site and blockage by high surrounding terrain.
- Areas that lack NEXRAD data from the ground radar site are indicated by white diagonal lines on the display. This

coverage overlay is updated continuously, based upon the availability of data from the NEXRAD site.

Graphical (AIRMET, SIGMET, Convective SIGMET, AWW)

- If the display is set to a high magnification (zooming) boundaries of the affected area may not be viewable at that setting.
- The format of AIRMET Freezing Level (FRZLV) and Low Level WindShear (LLWS) messages often precludes depicting this information in graphical form. Check for presence of these AIRMET messages in Text Mode.